

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Patent Application: Peter Rae Shintani et al
Application No.: 10/811,036
Filed: March 26, 2004
Title: "Systems and Methods for Television Antenna Operation"

Examiner: LONSBERRY, Hunter B.
Group Art Unit: 2421
Confirmation No.: 9541

Mail Stop Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

TRANSMITTAL OF REPLY BRIEF

Sir:

Transmitted herewith is the Reply Brief with respect to the Examiner's Answer mailed on July 9, 2009.

This Reply Brief is being filed pursuant to 37 CFR 1.193(b) within two months of the date of the Examiner's Answer.

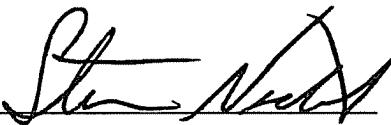
(Note: Extensions of time are not allowed under 37 CFR 1.136(a))

(Note: Failure to file a Reply Brief will result in dismissal of the Appeal as to the claims made subject to an expressly stated new ground rejection.)

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Respectfully submitted,

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REPLY BRIEF

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Alexandria, VA 22313-1450

Sir:

This is a Reply Brief under Rule 41.41 (37 C.F.R) in response to the Examiner's Answer of July 9, 2009 (the "Examiner's Answer" or the "Answer"). In Section 10, the Answer contains a response to some of the arguments made in Appellant's brief. Appellant now responds to the Examiner's Answer as follows.

Status of Claims

Claims 1-62 are pending in the application and stand finally rejected. Accordingly, Appellant appeals from the final rejection of claims 1-62, which claims are presented in the Appendix.

Grounds of Rejection to be Reviewed on Appeal

The ground of rejection remain unchanged. The final Office Action raised the following grounds of rejection.

- (1) Claims 1-16, 18-32, 34-45 and 47-61 were rejected under 35 U.S.C. § 102(e) as anticipated by U.S. Patent App. Pub. No. 2004/0252243 to Stewart (“Stewart”).
- (2) Claims 17, 33, 46 and 62 were rejected under 35 U.S.C. § 103(a) over the combined teachings of Stewart and U.S. Patent No. 6,069,462 to Flynn (“Flynn”).

According, Appellant hereby requests review of each of these grounds of rejection in the present appeal.

Argument

(1) Claims 1-16, 18-32, 34-45 and 47-61 are patentable over Stewart:

Claim 1:

Claim 1 recites:

A system for controlling an exterior television antenna comprising:
an amplifier circuit mounted on a building exterior with said exterior television antenna and connected to said television antenna; and
a control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.
(Emphasis added).

Thus, claim 1 calls for “an amplifier circuit mounted on a building exterior with said exterior television antenna.” This amplifier circuit has a variable gain that is controlled with “a control line extending into an interior of said building.”

In contrast, Stewart fails to teach or suggest this subject matter. Stewart teaches an antenna array (12), including a television signal processor (TSP) (14), mounted outside a structure (16). The TSP (14) includes “phase & gain adjustment & summer signal processing” (Fig. 7, element 60), which the Answer equates to the claimed amplifier circuit. “TSP 14 is in communication with distribution area 18 [inside the structure] via a conductor 70, operative to carrying [sic] multiple television signals and communication signals, such as coaxial (coax) cable.” (Stewart, paragraph 0049).

The Answer attempts to equate the coax cable (70) with the claimed “control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.” (Answer, p. 14). The Answer expressly concedes that “there is no teaching or suggestion in Stewart that coax cable 70 is utilized to

control the gain of an amplifier circuit as claimed in claim 1.” (Answer, p. 11). Nevertheless, the Answer essentially argues that the communication line (70) *indirectly* controls the gain of the TSP (14).

According to Stewart,

[t]he TSP 14 is provided control or request signals from each TSR 20 via the connecting conductor(s), preferably a coaxial cable (coax 70). The TSP 14 is operative to receive the control or request signals from each TSR 20 and uses the control signals to obtain and/or generate television channel signals for the TSR through television signals received by the antenna array 12 and the components and/or circuity/logic of the TSP 14.
(Stewart, paragraph 0054).

As the TSP 14 responds to request signals from viewers, it automatically processing the television signals.

[S]uch signal processing includes signal phase and gain adjustment, and signal summation. This is accomplished for each set of television channel signals that constitute the same television channel. Particularly, the signal processing 60 separately adjusts the phase and gain of each set of television channel signals, a set of television channel signals consisting of all television channel signals that are the same television channel, and sums the set of television channel signals to provide an optimum or aggregate television channel signal for each set of television channel signals.
(Stewart, paragraph 0056).

From such teachings, the Answer concludes that coax cable (70) provides a control signal to the TSP (14) to select a channel to be tuned and that the TSP (14) automatically adjusts the gain of signals corresponding to the selected channel. Therefore, the coax cable (70) indirectly controls the gain of the TSP (14). (Action, p. 14). Assuming *arguendo* that this is correct, Stewart still does not teach or suggest the control line as claimed.

Appellant understands that the examiner is to give claims the broadest *reasonable* interpretation. However, this interpretation must be consistent with what would be understood by those of ordinary skill in the art in light of the patent applicant’s own specification. “[D]uring

examination the USPTO must give claims their broadest reasonable interpretation >in light of the specification<.). This means that the words of the claim must be given their plain meaning unless **>the plain meaning is inconsistent with< the specification. *In re Zletz*, 893 F.2d 319, 321, 13 USPQ2d 1320, 1322 (Fed. Cir. 1989) (discussed below); *Chef America, Inc. v. Lamb-Weston, Inc.*, 358 F.3d 1371, 1372, 69 USPQ2d 1857 (Fed. Cir. 2004)." (MPEP § 2111.01). "[T]he ordinary and customary meaning of a claim term is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention, *i.e.*, as of the effective filing date of the patent application." *Phillips v. AWH Corp.*, *>415 F.3d 1303, 1313<, 75 USPQ2d 1321>, 1326< (Fed. Cir. 2005) (*en banc*). *Sunrace Roots Enter. Co. v. SRAM Corp.*, 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); *Brookhill-Wilk I, LLC v. Intuitive Surgical, Inc.*, 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003)." (MPEP § 2111.01).

With that in mind, claim 1 recites "a control line extending into an interior of said building, *said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.*" (Emphasis added). One of skill in the art would understand that a control line *for controlling a specific device* is a line that is used to deliver a control signal or command that controls that specific device. Any other interpretation of the language of claim 1 is beyond the broadest *reasonable* interpretation.

Thus, the claimed control line "for controlling a gain of said amplifier circuit" would be understood by one of skill in the art as delivering control signals that regulate the gain of the amplifier circuit. If not, the control line is *not* a control line "circuit for controlling a gain of said amplifier circuit," as stated in claim 1.

This is entirely consistent with Appellant's specification. According to the specification, "the television (103) has a control line (106) connected to the amplifier circuit (100) over which a control signal can be sent to control the amplifier circuit (100)." (Appellant's specification, paragraph 0025).

This "control signal [is effective] to adjust the gain of the amplifier circuit (100) accordingly." (Appellant's specification, paragraph 0027).

The position taken by the Answer is based on the premise that Appellant's "claim is silent regarding any requirement of a direct control command to control gain" being transmitted over the claimed control line. (Answer, p. 14). Appellant respectfully submits that this is an unreasonable interpretation of the language of claim 1.

One of ordinary skill in the art would inescapably understand from the language of claim 1, that the claimed "control line ... connected to said amplifier circuit for controlling a gain of said amplifier circuit," is configured to carry a control signal or command that controls the gain of the amplifier circuit. In fact, several of the dependent claims discussed below makes this point explicitly.

In contrast, Stewart teaches a coax cable that carries a channel selection signal, based on which the TSP (14) may automatically adjust phase and gain. Clearly, Stewart does not teach or suggest the claimed control line "for controlling a gain of said amplifier circuit," recited in claim 1, as that control line would be understood by one of ordinary skill in the art.

Respectfully, to anticipate a claim, a reference must teach each and every element of the claim, and "the identical invention must be shown *in as complete detail as contained in the ... claim.*" MPEP 2131 citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 2

USPQ2d 1051 (Fed. Cir. 1987) and *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 9 USPQ2d 1913 (Fed. Cir. 1989) (emphasis added). Moreover, “[t]he prior art reference—in order to anticipate under 35 U.S.C. § 102—must not only disclose all elements of the claim within the four corners of the document, but must also disclose those elements ‘arranged as in the claim.’” *NetMoneyIn v. Verisign*, (Fed. Cir. 2008) (quoting *Connell v. Sears, Roebuck & Co.*, 722 F.2d 1542 (Fed. Cir. 1983)).

In the present instance, Stewart clearly does not teach or suggest each and every element of claim 1. Stewart does not teach the claimed “control line” as described above. Further, Stewart does not teach or suggest the claimed invention in as much detail as recited in claim 1 or with elements as arranged in the claim. For any and all of these reasons, the rejection of claim 1 and its dependent claims should not be sustained.

Claim 18:

Claim 18 recites:

A method for controlling an exterior television antenna comprising:
selectively amplifying a signal from said television antenna with an amplifier circuit mounted on a building exterior with said exterior television antenna; and
a control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit.
(Emphasis added).

In contrast, as demonstrated above, Stewart does not teach or suggest a method that includes selectively amplifying a signal from a television antenna with an amplifier circuit mounted on a building exterior with the antenna *with a control line extending into an interior of the building for controlling the gain of the amplifier circuit.*

Again, “a claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). See M.P.E.P. § 2131. As demonstrated above, Stewart fails to teach or suggest the claimed control line extending into an interior of said building, said control line being connected to said amplifier circuit for controlling a gain of said amplifier circuit. Consequently, the rejection based on Stewart of claim 18 and its dependent claims should not be sustained.

Claim 34:

Claim 34 recites:

A system for controlling an exterior television antenna comprising:
amplifying means for selectively amplifying a signal from said television antenna,
said amplifying means being mounted on a building exterior with said exterior television antenna; and
control means for controlling a gain of said amplifying means, said control means comprising a receiving device inside said building.
(Emphasis added).

In contrast, as demonstrated above, Stewart does not teach or suggest a system that includes amplifying means for selectively amplifying a signal from a television antenna mounted on a building exterior with the exterior television antenna, where a gain of the amplifying means is controlled by a control means comprising a receiving device inside the building. Stewart never teaches or suggests a receiving device inside the building that is part of the means for controlling the gain of amplifying means mounted on the building exterior.

Again, “a claim is anticipated [under 35 U.S.C. § 102] only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference.” *Verdegaal Bros. v. Union Oil Co. of California*, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir.

1987). See M.P.E.P. § 2131. Therefore, for at least the reasons explained here, the rejection based on Stewart of claim 34 and its dependent claims should not be sustained.

Additionally, various dependent claims of the application recite subject matter that is further patentable over the cited prior art. Specific, non-exclusive examples follow.

Claim 7:

Claim 7 recites “wherein said control line carries a control signal which is a direct current (DC) voltage signal comprising a voltage to power said amplifier circuit plus an additional voltage that varies to indicate a desired gain of said amplifier circuit.” This subject matter is clearly not taught or suggested by Stewart.

As demonstrated above, the Answer focuses on Stewart’s teaching of a coax cable (70) that provides a control signal to the TSP (14) to select a channel to be tuned and that the TSP (14) automatically adjusts the gain of signals corresponding to the selected channel. Therefore, according to the Answer, the coax cable (70) indirectly controls the gain of the TSP (14). (Action, p. 14).

Assuming *argumendo* that this is correct, Stewart clearly does not, and could not, teach or suggest “a direct current (DC) voltage signal” being used to designate a channel to be tuned. There is no teaching or suggestion of a DC voltage signal being used to designate which channel should be tuned.

Therefore, the coax cable (70) taught by Stewart is clearly not carrying a “voltage that varies to indicate a desired gain of said amplifier circuit.” (Claim 7). Any such conclusion would be unreasonable.

The Answer further does not appear to address the language in claim 7 which specifies that the control line also carries “a voltage to power said amplifier circuit.” (Claim 7). There is absolutely no teaching or suggestion in Stewart that the coax cable (70) provides power for the amplification functions of the TSP (14). Moreover, the Answer does not appear to even attempt to show such subject matter in the prior art.

Consequently, no *prima facie* case of unpatentability has been made as to claim 7. For at least these additional reasons, Stewart clearly does not anticipate claim 7, and the rejection of claim 7 and the other claims noted here should be reconsidered and withdrawn.

Claim 9:

Claim 9 recites “wherein said amplifier circuit comprises a voltage controlled amplifier, wherein said amplifier receives power and a voltage controlling a gain of said amplifier over said control line.” In contrast, the TSP taught by Stewart digitizes the signals (Fig. 7, element 58) before *digitally* adjusting gain (Fig. 7, element 60). Therefore, Stewart clearly does not teach or suggest the claimed voltage controlled amplifier of claim 9.

Additionally, as demonstrated above, Stewart clearly does not teach or suggest an “amplifier [that] receives power and a voltage controlling a gain of said amplifier over said control line.” (Claim 9). Stewart clearly does not teach or suggest a control line that provides both power for an amplifier *and* a voltage for controlling the gain of that amplifier.

For at least these additional reasons, Stewart clearly does not anticipate claim 9. Thus, the rejection of claim 9 and the other claims noted here should be reconsidered and withdrawn.

Claim 10:

Claim 10 recites “wherein said amplifier circuit comprises: an attenuator connected to and controlled by said control line; and an amplifier, wherein said attenuator selectively attenuates a signal from said antenna before providing that signal to said amplifier.” In contrast, as clearly seen if Fig. 7 of Stewart, there is no attenuator, as claimed, that attenuates the signal from the antenna (Fig. 7, element 12) before its gain is adjusted (Fig. 7, element 60). Rather, Stewart only teaches tuning desired signals from the antenna array (Fig. 7, element 52) and digitizing those tuned signals (Fig. 7, element 56). Thus, Stewart clearly fails to teach or suggest the subject matter of claim 10.

The Advisory Action argues that an attenuator is inherent in the teachings of Stewart. (Advisory Action, p. 2). This is clearly incorrect.

"To establish inherency, the extrinsic evidence 'must make clear that the missing descriptive matter is necessarily present in the thing described in the reference, and that it would be so recognized by persons of ordinary skill.' 'Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.'" *In re Robertson*, 49 USPQ2d 1949, 1950 (Fed. Cir. 1999) (citations omitted). "[T]he examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic *necessarily* flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990)

(emphasis in original); see also, MPEP § 2112 (quoting Levy). Clearly, the Examiner has failed to establish that Stewart “necessarily” includes an unmentioned attenuator.

The Answer charges that “Appellant has failed to address the merits of the Examiner’s inherency argument.” (Answer, p. 18). This is incorrect. As noted above, the Examiner has not met the standard required for an inherency argument. Consequently, Appellant is under no burden to address the merits of a rejection that has none.

According to the Answer, Stewart teaches “that multiple TV signals are gain aligned and summed together (paragraphs 62-63) [therefore] some of the signals are going to have their respective gains increased or decreased.” (Answer, p. 18). However, there is nothing on the record that supports this conclusion. There is nothing that indicates that some of the signals must “necessarily” have a decreased gain, which the Answer equates with the operation of the claimed attenuator.

According to Stewart, only the signals for selected channels are processed. According to Stewart, as cited in the Answer,

[e]ach P&GA&S thus provides phase and gain aligning and summation to a one set of television channel signals (i.e. any number of television channel signals of a particular channel). The TSP 14 may process from only one television channel to up to “n” number of television channels. ... In the case of “n” number of television channels requested by “n” number of TSRs, individual television channel signals are used to provide the optimum television channel signal.

(Stewart, paragraph 0063).

Consequently, as only requested television channel signals are being processed with a gain adjusted, there is no indication that any of such signals will “necessarily” be attenuated as recited in claim 10. Thus, the inherency argument of the Answer is without merit.

Moreover, claim 10 recites that the attenuator is “connected to and controlled by” the same control line as the amplifier. The Answer fails to address this aspect of claim 10.

For any and all of these reasons, the rejection of claim 10 should not be sustained.

Claim 15:

Claim 15 recites:

wherein:

 said exterior television antenna comprises two or more antenna elements differently oriented;

 said amplifier circuit further comprises two or more amplifiers connected to respective antenna elements; and

 said control line provides independent control signals to said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.

Stewart clearly does not teach or suggest this subject matter.

As noted above, with regard to the claimed control line, Stewart, at best, teaches a coax cable (70) that carries channel selection data which may or may not, indirectly, impact the gain applied by the TSP (14). Clearly, therefore, Stewart does not and cannot teach or suggest the claimed control line that “provides independent control signals to said amplifiers to selectively adjust a gain of each of said amplifiers to adjust a polarity of said antenna.” (Claim 15). This subject matter is simply beyond the scope and content of the cited prior art.

For at least these additional reasons, Stewart clearly does not anticipate claim 15. Thus, the rejection of claim 15 and the other claims noted here should be reconsidered and withdrawn.

(2) Claims 17, 33, 46 and 62 are patentable over Stewart and Flynn:

This rejection should not be sustained for at least the same reasons given above in favor of the patentability of the corresponding independent claims.

In view of the foregoing, it is submitted that the final rejection of the pending claims is improper and should not be sustained. Therefore, a reversal of the Rejection of June 27, 2008 is respectfully requested.

Respectfully submitted,

DATE: September 9, 2009

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